इंटरनेट मानक

Disclosure to Promote the Right To Information

Whereas the Parliament of India has set out to provide a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, and whereas the attached publication of the Bureau of Indian Standards is of particular interest to the public, particularly disadvantaged communities and those engaged in the pursuit of education and knowledge, the attached public safety standard is made available to promote the timely dissemination of this information in an accurate manner to the public.

"जानने का अधिकार, जीने का अधिकार"
Mazdoor Kisan Shakti Sangathan
"The Right to Information, The Right to Live"

"पुराने को छोड नये के तरफ"
Jawaharlal Nehru
"Step Out From the Old to the New"

IS 11680 (1986): Hexagonal Slotted (Castellated) Nuts (M J Series) [TED 14: Aircraft and Space Vehicles]

"ज्ञान से एक नये भारत का निर्माण"
Satyanarayan Gangaram Pitroda
"Invent a New India Using Knowledge"

Act Number 22 of 2005
The Indian Parliament
RIGHT TO INFORMATION

Made Available By
Public.Resource.Org

"ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है"
Bhartṛhari—Nītiśatakam
"Knowledge is such a treasure which cannot be stolen"

BLANK PAGE

BRUTUM FULMEN
IGNORANTIA JURIS NON EXCUSAT
PROTECTED BY COPYRIGHT

UDC 621·882·31 : 629·73

(Reaffirmed 2002)

Indian Standard

SPECIFICATION FOR HEXAGONAL SLOTTED (CASTELLATED) NUTS (M J SERIES)

1. Scope — Covers the requirements for hexagonal nuts with slotted upper portion to receive a split pin with strength classification of 1100 MPa and temperature of operation not exceeding 235°C.

2. Field of Application — These types of nuts are intended for use in airborne vehicle assemblies in which the fasteners are subjected mainly to tensile loads and where positive locking is required between the nuts and the accompanying threaded parts.

3. Forms and Dimensions — Shall conform to the configuration given in Table 1 read with Fig. 1.

3.1 The threads shall be in accordance with IS : 10980 (Parts 1 and 2) - 1984 ' Aerospace bolts and nuts (MJ Threads) : Part 1 Basic profile and Part 2 Dimensions for bolts and nuts '.

3.1.1 The linear dimensions shall be checked for conformity to the requirements after cadmium plating.

3.1.2 For other requirements, the nuts shall comply with IS : 10628-1933 ' General requirements for aerospace bolts and nuts '.

4. Material

4.1 All nuts shall be manufactured from materials specified by the purchaser.

5. Surface Roughness

5.1 The surface texture applicable before cadmium plating shall be N9 (Ra. 6·3 *Max*). This requirement is not applicable to threads where the surface texture is achieved by normal methods of manufacture.

6. Surface Treatment

6.1 The nuts shall be cadmium plated to the thickness and by a process as agreed to between the manufacturer and the purchaser.

7. Packing — Shall be as per agreement between the supplier and the purchaser.

8. Sampling — Unless otherwise agreed upon between the purchaser and the supplier, the sampling scheme shall be in accordance with IS : 2500 (Part 1) - 1973 ' Sampling inspection tables : Part 1 Inspection by attributes and by count of defects (*first revision*) '.

Aircraft and Space Vehicles Sectional Committee, EDC 74; Aircraft Fasteners Subcommittee, EDC 74 : 2 [Ref : Doc : EDC 74 (4392)]

Adopted 1 April 1986	© December 1986, ISI	Gr 2

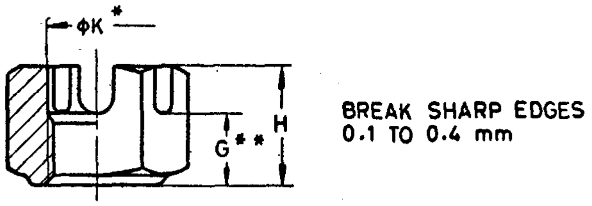
INDIAN STANDARDS INSTITUTION
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

TABLE 1 DIMENSIONS AND MASSES FOR HEXAGONAL SLOTTED (CASTELLATED) NUTS

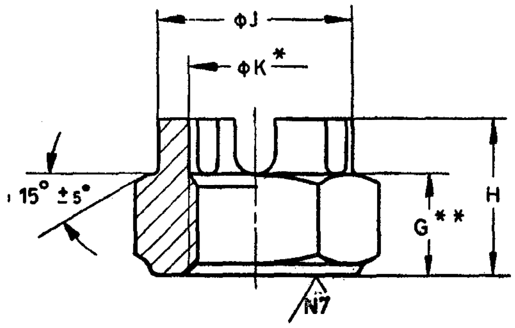
(*Clause* 3)

All dimensions in millimetres.

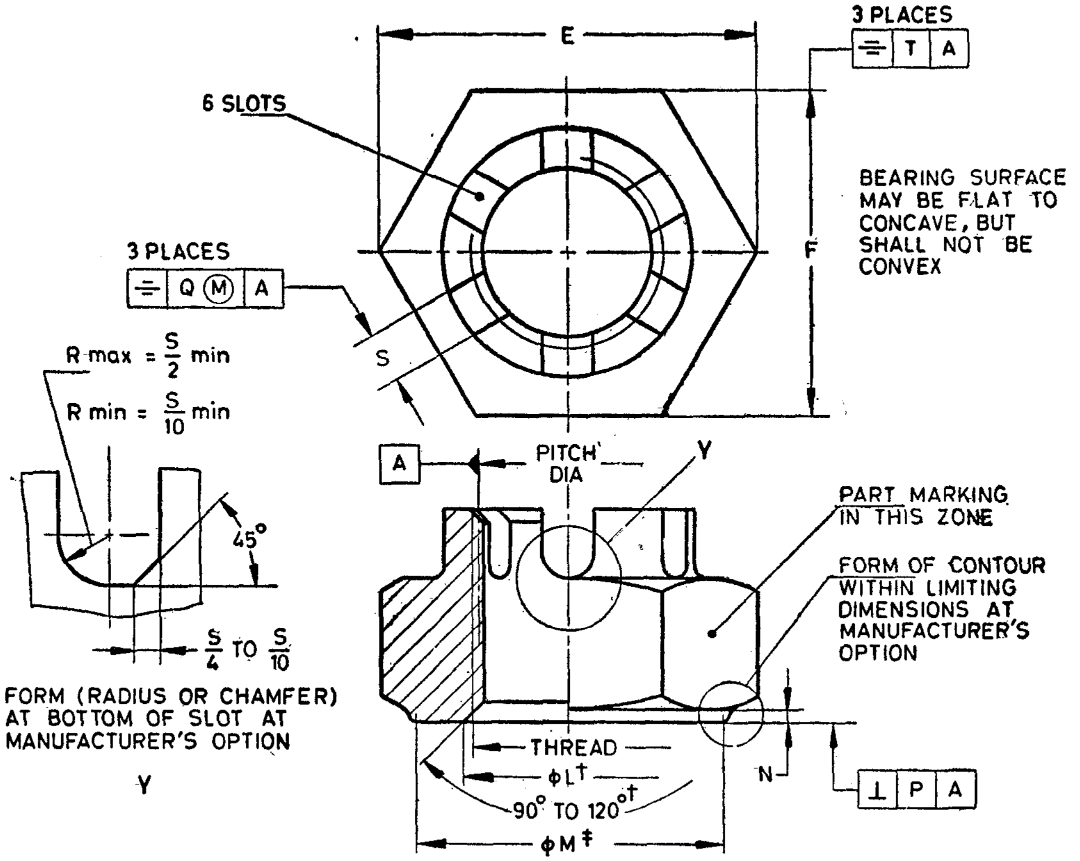
Size Code	Thread	E	F	G	H	J	K	L		M	N		P	Q	S	T	Mass kg/1000	Split Pin Maximum Diameter Reference
		Min		±0·25	±0·25	±0·25	H15	*Max*	*Min*	*Min*	*Max*	*Min*			H14		*Max*	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
040	MJ4×0·7—4H6H	7·6	7 h 12	3·00	5·00	—	4	4·8	4·2	6·4	0·5	0·2	0·10	0·2	1·3	0·3	1·3	1·0
050	MJ5×0·8—4H6H	8·7	8	3·75	6·20	—	5	5·8	5·2	7·4	0·5	0·2	0·10	0·2	1·7	0·3	1·8	1·4
060	MJ6×1—4H5H	10·9	10 h 13	4·50	6·90	9·00	6	7·1	6·3	9·3	0·5	0·2	0·10	0·2	1·7	0·3	2·8	1·4
070	MJ7×1—4H5H	12·0	11	5·25	8·10	10·00	7	8·1	7·3	10·2	0·5	0·2	0·10	0·2	2·1	0·36	3·8	1·8
080	MJ8×1—4H5H	14·3	13	6·00	8·80	11·00	—	9·1	8·3	12·2	0·5	0·2	0·10	0·2	2·1	0·36	5·6	1·8
100	MJ10×1·25—4H5H	18·9	17	7·50	11·10	13·00	—	11·1	10·3	16·0	0·6	0·3	0·13	0·25	2·6	0·36	11·5	2·3
120	MJ12×1·25—4H5H	21·1	19	9·00	12·60	16·00	—	13·1	12·3	18·0	0·6	0·3	0·13	0·25	2·6	0·43	16	2·3
140	MJ14×1·5—4H5H	24·5	22	10·50	14·90	18·00	—	15·2	14·4	21·0	0·6	0·3	0·15	0·25	3·2	0·43	24·5	2·9
160	MJ16×1·5—4H5H	26·8	24	12·00	16·40	22·00	—	17·2	16·4	23·0	0·6	0·3	0·18	0·3	3·2	0·43	33·5	2·9
180	MJ18×1·5—4H5H	30·2	27	13·50	18·70	25·00	—	19·2	18·4	26·0	0·6	0·3	0·18	0·3	4·0	0·43	48·5	3·7
200	MJ20×1·5—4H5H	33·6	30	15·00	20·20	28·00	—	21·2	20·4	29·0	0·6	0·3	0·18	0·3	4·0	0·52	66	3·7



FORM FOR SIZE CODES 040 AND 050



FORM FOR SIZE CODES 060 AND 070


E
3 PLACES
⌯ T A
6 SLOTS
BEARING SURFACE MAY BE FLAT TO CONCAVE, BUT SHALL NOT BE CONVEX
F
3 PLACES
⌯ Q Ⓜ A
S
R max = S/2 min
R min = S/10 min
45°
S/4 TO S/10
FORM (RADIUS OR CHAMFER) AT BOTTOM OF SLOT AT MANUFACTURER'S OPTION
Y
A
PITCH DIA
Y
PART MARKING IN THIS ZONE
FORM OF CONTOUR WITHIN LIMITING DIMENSIONS AT MANUFACTURER'S OPTION
THREAD
ΦL†
90° TO 120°†
ΦM‡
N
⊥ P A

FORM FOR SIZE CODES 080 TO 200

*Tool marks permissible within counterbore.

**Dimension *G* applies to :

- height below slots (diameter codes 040 to 200).
- height of flats (diameter codes 060 to 200).
- bottom of counterbore (diameter codes 040 to 070).

†This dimension also applies to the upper chamfer. All forms of entry (chamfer or radius) optional within these limiting dimensions.

‡*M* may be tangential to, but shall not intrude on the flats.

FIG. 1 DIMENSIONS FOR HEXAGONAL SLOTTED NUTS

EXPLANATORY NOTE

This Indian Standard is one in the series of standards being developed for aerospace fasteners.

While preparing this standard, considerable assistance has been taken from ISO 4147-1983 'Metric fasteners for aerospace construction — Hexagonal slotted (castellated) nuts — Strength classification 1100 MPa — maximum operating temperature 235°C', issued by the International Organization for Standardization (ISO).

Reference has also been made to IS : 10628 - 1983 'General requirements for aerospace bolts and nuts'.

Printed at Delhi Printers, Delhi, India